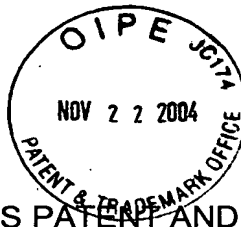


Docket Number: 081468-0310717
Client Reference: P-1943.063-US



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of

HOFFMAN et al.

Group Art Unit: 2873

Application No.: 10/759,699

Examiner: M. HASAN

Filed: January 19, 2004

Confirmation No.: 8455

For: CORRECTION OF BIREFRINGENCE IN CUBIC CRYSTALLINE OPTICAL
SYSTEMS

November 22, 2004

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of each foreign reference and article is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom. Applicants respectfully request the Examiner return an initialed copy of the enclosed Form PTO-1449 to Applicants with the next Office communication to indicate that the reference(s) has been considered, per MPEP § 609.

This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.

English-language Abstracts of the non-English language references are attached hereto.

11/23/2004 FFANAEIA 00000103 033975 10759699


01 FC:1806 180.00 DA

HOFFMAN et al. — 10/759,699
Docket No. 081468-0310701

Please charge the \$180.00 fee for the filing of this Information Disclosure
Statement to Deposit Account No. 033975.

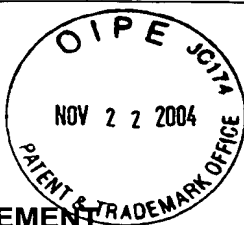
Respectfully submitted,

PILLSBURY WINTHROP LLP



Christophe F. Lair
Reg. No. 54248

CFL/smm
P.O. Box 10500
McLean, VA 22102
Telephone: (703) 905-2000
Facsimile: (703) 905-2500
Customer Number: 00909



Atty. Dkt. No.	M#	Client Ref.
	310701	P-1943.063-US

**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: HOFFMAN et al.

Appln. No.: 10/759,699

Filing Date: January 19, 2004

Date: November 22, 2004 Page 1 of 5

Examiner: M. HASAN Group Art Unit: 2873

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	AR	5,410,375	04/1995	Fiala			
	BR	6,366,404	04/2002	Hiraiwa et al.			
	CR	6,411,384	06/2002	Sakuma et al.			
	DR	6,417,974	07/2002	Schuster			
	ER	6,583,931	06/2003	Hiraiwa et al.			
	FR	6,672,109	01/2004	Hiraiwa			
	GR	6,683,729	01/2004	Schuster			
	HR	6,697,199	02/2004	Gerhard et al.			
	IR	6,728,043	04/2004	Gruner et al.			
	JR	6,775,063	08/2004	Shiraishi			
	KR	2002/0085176	07/2002	Hiraiwa et al.			
	LR	2002/0149855	10/2002	Schuster			
	MR	2002/0186355	12/2002	Omura			
	NR	2003/0000453	01/2003	Unno et al.			
	OR	2003/0007253	01/2003	Schuster et al.			
	PR	2003/0012724	01/2003	Burnett et al.			
	QR	2003/0063393	04/2003	Omura			

FOREIGN PATENT DOCUMENTS

		Document Number	Date MM/YYYY	Country	Inventor Name		English Abstract		Translation Readily Available	
							Enclosed	No	Enclose	No
	RR	DE 101 23 725	11/2002	Germany	Wagner et al.				X	
	SR	DE 101 23 727	11/2002	Germany	Brunotte et al.				X	
	TR	DE 101 25 487	01/2003	Germany	Brunotte et al.				X	
	UR	DE 101 27 320	12/2002	Germany	Brunotte et al.		X			
	VR	DE 102 10 782	10/2003	Germany	Krähmer et al.		X			
	WR	2002-302628	10/2002	Japan	Mitsuhiko et al.		X			
	XR	2003-050349	02/2003	Japan	Naomasa et al.		X			
	YR									
	ZR									
	AAR									

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

BBR			
-----	--	--	--

Examiner Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449 (modified)
To: U.S. Department of Commerce
(PW FORM PAT-1449)
Patent and Trademark Office

Atty.
Dkt. No.

M#

Client Ref.

310701

P-1943.063-US

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Applicant: HOFFMAN et al.

Appln. No.: 10/759,699

Filing Date: January 19, 2004

Date: November 22, 2004

Page

2

of

5

Examiner: M. HASAN

Group Art Unit: 2873

U.S. PATENT DOCUMENTS

Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	CCR 2003/0086157	05/2003	McGuire, Jr.			
	DDR 2003/0086171	05/2003	McGuire			
	EER 2003/0089299	05/2003	Obara et al.			
	FFR 2003/0091934	05/2003	Allan et al.			
	GGR 2003/0112501	06/2003	Sakuma			
	HHR 2003/0128349	07/2003	Unno			
	IIR 2003/0147061	08/2003	Omura			
	JJR 2003/0197946	10/2003	Omura			
	KKR 2003/0234981	12/2003	Hoffman et al.			
	LLR 2004/0001244	01/2004	Hoffman et al.			
	MMF 2004/0004757	01/2004	Schuster			
	NNR 2004/0004771	01/2004	Omura			
	OOR 2004/0005266	01/2004	Sakuma et al.			
	PPR 2004/0036961	02/2004	McGuire, Jr.			
	QQR 2004/0036971	02/2004	McGuire, Jr.			
	RRR 2004/0036985	02/2004	McGuire, Jr.			
	SSR 2004/0105170	06/2004	Krahmer et al.			
	TTR 2004/0136084	07/2004	Unno			

FOREIGN PATENT DOCUMENTS

	Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract		Translation Readily Available	
					Enclosed	No	Enclose	No
	UUR WO 01/01182	01/2001	WIPO	Meda et al.				
	VVR WO 02/093257	11/2002	WIPO	Brunotte et al.	X			
	WW WO 03/003429	01/2003	WIPO	Omura et al.	X			
	XXR WO 03/007046	01/2003	WIPO	Yamaguchi	X			
	YYR WO 03/046634	06/2003	WIPO	Omura et al.	X			
	ZZR WO 03/077011	09/2003	WIPO	Fiolka et al.				
	AAA WO 03/077007	09/2003	WIPO	Goehnermeier et al.	X			
	BBB WO 03/088330	10/2003	WIPO	Yamaguchi	X			
	CCC WO 04/008254	01/2004	WIPO	Yamada				
	DDD							

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

EEE

Examiner

Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449 (modified) To: U.S. Department of Commerce (PW FORM PAT-1449) Patent and Trademark Office	Atty. Dkt. No.	M# 310701	Client Ref. P-1943.063-US
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant: HOFFMAN et al.	
		Appln. No.: 10/759,699	
		Filing Date: January 19, 2004	
		Examiner: M. HASAN	Group Art Unit: 2873
Date: November 22, 2004 Page 3 of 5			

U.S. PATENT DOCUMENTS							
Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)	
	AR						

FOREIGN PATENT DOCUMENTS						English Abstract		Translation Readily Available	
Document Number	Date MM/YYYY	Country	Inventor Name						
	BR								

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)									
	CR	Burnett et al., "Intrinsic Birefringence in 157 nm Materials," <i>National Institute of Standards and Technology</i> , SEMATECH Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides.							
	DR	Burnett et al., "Intrinsic Birefringence in Calcium Fluoride and Barium Fluoride," <i>Rapid Communications</i> , Physical Review B, Vol. 64, November 29, 2001, pp. 241102-1 - 4.							
	ER	Burnett et al., "Intrinsic Birefringence in 157 nm Materials," <i>National Institute of Standards and Technology</i> , Slides.							
	FR	Chiba et al., "New Generation Projection Optics for ArF Lithography," <i>Optical Microlithography XV</i> , Proceedings of SPIE, Vol. 4691, 2002, pp. 679-686.							
	GR	Matsumoto et al., "Analysis of Imaging Performance Degradation," <i>Optical Microlithography XVI</i> , Proceedings of SPIE, Vol. 5040, 2003, pp. 131-138.							
	HR	Matsuyama et al., "High NA and Low Residual Aberration Projection Lens for DUV Scanner," <i>Optical Microlithography XV</i> , Proceedings of SPIE, Vol. 4691, 2002, pp. 687-695.							
	IR	Matsuyama et al., "Microlithographic Lens for DUV Scanner," <i>International Optical Design Conference 2002</i> , Proceedings of SPIE, Vol. 4832, 2002, pp. 170-174.							
	JR	Matsuyama et al., "Nikon Projection Lens Update," <i>Nikon Corporation</i> , SPIE Microlithography 5377-65, February 27, 2004, Slides 1-25.							
	KR	Matsuyama et al., "Nikon Projection Lens Update," Precision Equipment Company, <i>Nikon Corporation</i> .							
	LR	Miyawaki et al., "Development of 157nm Exposure Tools," <i>Canon</i> , 157nm Technical Data Review, December 11-13, 2001, Slides 1-22.							
	MR	Nakano et al., "The Development of 193nm-Immersion Exposure Tools," <i>Canon</i> , International Symposium on Immersion & 157nm Lithography, August 3, 2004, Slides 1-25.							
	NR	Nattermann et al., "Birefringence of CAF ₂ ," <i>Schott Lithotec</i> , July 23, 2001, Slides.							
	OR	Nogawa, "Development Status of 157nm Exposure Tools," <i>Canon Inc.</i> , Semiconductor Production Equipment Development Center, Slides 1-26.							
	PR	Nogawa et al., "System Design of a 157nm Scanner," <i>Canon Inc.</i>							

Examiner	Date Considered:
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	

FORM PTO-1449 (modified) To: U.S. Department of Commerce (PW FORM PAT-1449) Patent and Trademark Office	Atty. Dkt. No.	M# 310701	Client Ref. P-1943.063-US
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant: HOFFMAN et al.	
		Appln. No.: 10/759,699	
		Filing Date: January 19, 2004	
		Examiner: M. HASAN	Group Art Unit: 2873
Date: November 22, 2004 Page 4 of 5			

U.S. PATENT DOCUMENTS							
Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	QR						

FOREIGN PATENT DOCUMENTS							English Abstract		Translation Readily Available	
		Document Number	Date MM/YYYY	Country	Inventor Name		Enclosed	No	Enclose	No
	RR									

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)										
	SR	Unno et al., "Analyses of Imaging Performance Degradation Caused by Birefringence Residual in Lens Materials," <i>Optical Microlithography XIV</i> , Proceedings of SPIE, Vol. 4346, 2001, pp. 1306-1317.								
	TR	Owa et al., "Nikon F2 Exposure Tool," <i>Nikon Corporation</i> , 157nm Data Review, December 2001, Slides 1-24.								
	UR	Owa et al., "Nikon F2 Exposure Tool," <i>Nikon Corporation</i> , 3 rd 157nm Symposium, September 4, 2002, Slides 1-25.								
	VR	Shiraishi et al., "Current Status of Nikon's Investigation on CaF ₂ Intrinsic Birefringence," <i>Nikon Corporation</i> , International SEMATECH Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides 1-15.								
	WR	Shiraishi et al., "Progress of Nikon's F2 Exposure Tool Development," <i>Optical Microlithography XV</i> , Proceedings of SPIE, Vol. 4691, 2002, pp. 594-601.								
	XR	Shiraishi et al., "Current Status of F2 Exposure Tool Development," Precision Company, <i>Nikon Corporation</i> , NGL Workshop 2003, July 10, 2003, pp. P1-P29.								
	YR	Suzuki et al., "Influence of the Intrinsic Birefringence in F2 Projection System," <i>Canon Inc.</i> , Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides.								
	ZR	Takahashi, "Current Status and Future Plan for 157nm Lithography," <i>Canon Inc.</i> , Litho Forum Los Angeles, International SEMATECH, January 27-29, 2004, Slides.								
	AAR	Tirri et al., "Intrinsic Birefringence Impact on the ASML Wilton 157nm Lens," <i>ASML</i> , Wilton, Connecticut, Intrinsic Biref Sematech, July 17, 2001, Slides 1-15.								
	BBR	Van Peski, "Lens Design Software CODE V® Modification," <i>International SeMaTech</i> , July 18, 2001, Slides.								
	CCR	Walker, "Simulation of Intrinsic Birefringence of CaF ₂ in Code V®," <i>Optical Research Associates</i> , SEMATECH Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides.								
	DDR	Wang, "157 nm Birefringence Measurement System Using PEM Technology," <i>Hinds Instruments</i> , Slides.								
	EER	Ware, "Pushing ArF to the Limits!," <i>Canon USA</i> , DNS Lithography Breakfast Forum at SEMICON West 2003, July 2003, Slides.								

Examiner	Date Considered:
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	

FORM PTO-1449 (modified)
To: U.S. Department of Commerce
(PW FORM PAT-1449)
Patent and Trademark Office

Atty.
Dkt. No.

M#

Client Ref.

310701

P-1943.063-US

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Applicant: HOFFMAN et al.

Appln. No.: 10/759,699

Filing Date: January 19, 2004

Date: November 22, 2004

Page

5

of

5

Examiner: M. HASAN

Group Art Unit: 2873

U.S. PATENT DOCUMENTS

Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	FFR					

FOREIGN PATENT DOCUMENTS

Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract	Translation Readily Available
				Enclosed	No
	GGR				

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

	HHR	Webb, Intrinsic Birefringence Workshop, <i>Corning</i> , Corning Tropel, July 18, 2001, Slides.				
	IIR	Zeiss et al., "Intrinsic Birefringence in CaF ₂ ," <i>Zeiss</i> , CaF ₂ Birefringence Workshop, Slides.				
	JJR	"Business and Technology Update," <i>Canon Europa N.V.</i> , Amstelveen, Slides.				
	KKR	Memorandum from C. Van Peski to Exposure Tool Manufacturers and Lens Designers, Regarding Birefringence of Calcium Fluoride, May 7, 2001, XP-002218848.				
	LLR	Memorandum from C. Van Peski to PAG Members, Regarding Birefringence of Calcium Fluoride, May 7, 2001.				
	MMR					
	NNR					
	OOR					
	PPR					
	QQR					
	RRR					
	SSR					
	TTR					
	UUR					
	VVR					
	WWI					

Examiner

Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.